



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,410	09/26/2005	Kazuhiko Miyata	70404.45/sh	3088
54/072 7590 06/11/2009 SHARP KABUSHIKI KAISHA C/O KEATING & BENNETT, LLP 1800 Alexander Bell Drive SUITE 200 Reston, VA 20191				
EXAMINER LE, HUYNH D				
ART UNIT 2614		PAPER NUMBER		
NOTIFICATION DATE 06/11/2009		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JKEATING@KBIPLAW.COM
uspto@kbiplaw.com

Office Action Summary

Application No.

10/526,410

Applicant(s)

MIYATA, KAZUHIKO

Examiner

HUYEN D. LE

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 36-83 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 63-83 is/are allowed.
6) ☒ Claim(s) 36-41, 43-46, 48, 49, 54-57, 59, 61 and 62 is/are rejected.
7) ☒ Claim(s) 42, 47, 50-53, 58 and 60 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 03/02/05 & 09/19/05
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☒ Other: IDS filed 03/24/08

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 36-41, 43-46, 48, 49, 54-57, 59, 61 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art (figure 3) as admitted by the Applicant in view of Makoto (JP 2003-271074).

Regarding claims 36, 37, 44, 46, 54 and 62, the admitted prior art (figure 3) teaches a liquid crystal display device comprising a liquid crystal panel (11, 12) including a first substrate, a second substrate and a liquid crystal layer, a connection terminal (16) disposed on the side of the second substrate (12), a light guide plate (20) disposed on the side of the second substrate, and a light source (22) disposed near a predetermined side of the light guide plate so that light enters the light guide plate (20) from the predetermined side. The admitted prior art (figure 3) does not teach an excitation source as claimed. However, providing an excitation source disposed on the second substrate or bottom substrate of the liquid crystal panel is well known in the art.

Makoto teaches an excitation source (209, figures 6a, 6b) disposed at an edge portion of the second or bottom substrate (204b) of a liquid crystal display.

Therefore, it would have been obvious to one skilled in the art to provide an excitation source, as taught by Makoto, disposed at the edge portion of the second substrate (12) near a side

of the light guide plate (20) of the admitted prior art for better providing a sounding function to the device. The excitation of the admitted prior art in view of Makoto would be disposed at an edge portion of the second or bottom substrate on the side thereof that is not in contact with the liquid crystal layer at a position opposite the connection terminal portion (note the circuit board 106 and the light source 22 on one side of the bottom substrate 12 in the admitted prior art and the excitation source 209 at another side of the bottom substrate).

Further, Makoto shows a sheet of optical material as claimed (figures 6a, 7a, 8a, 9a, 10a, 11).

Regarding claims 38 and 41, the admitted prior art in view of Makoto do not specifically disclose the light source that is disposed near a side of the light guide plate as claimed. However, Makoto does not restrict to any locations at the edge of the substrate (11, 12). Therefore, it would have been obvious to one skilled in the art to provide the excitation source disposed at any locations of the edge portion of the substrate (11, 12) of the admitted prior art in view of Makoto such as the light source disposed near a side of the light guide plate that is adjacent to the side closest to the excitation source for better fitting to the device and depending on the desired frequency characteristics.

Regarding claims 39, 45 and 55, the admitted prior art (figure 3) teaches a liquid crystal display device comprising a liquid crystal panel (11, 12) including a first substrate, a second substrate and a liquid crystal layer, a light guide plate (20) disposed on the side of the second substrate, and a light source (22) disposed near a predetermined side of the light guide plate so that light enters the light guide plate (20) from the predetermined side. The admitted prior art

(figure 3) does not teach an excitation source as claimed. However, providing an excitation source disposed on a substrate of the liquid crystal panel is well known in the art.

Makoto teaches an excitation source (9, 209, 309, 409, 909) disposed at an edge portion of the substrate of a liquid crystal display.

Therefore, it would have been obvious to one skilled in the art to provide an excitation source, as taught by Makoto, disposed at any locations or any sides of the edge portion of the substrate (11, 12) near a side of the light guide plate (20) of the admitted prior art such as the location or the side other than the predetermined side for better providing a sounding function to the device.

Further, Makoto shows a sheet of optical material as claimed (figures 6a, 7a, 8a, 9a, 10a, 11).

Regarding claim 40, the admitted prior art in view of Makoto do not specifically disclose the light source that is disposed opposite to the excitation source as claimed. However, Makoto does not restrict to the location for the excitation source at the edge of the substrate (11, 12). Therefore, it would have been obvious to one skilled in the art to provide the excitation source disposed at any locations of the edge portion of the substrate (11, 12) of the admitted prior art in view of Makoto such as the excitation source is disposed opposite to the light source with the light guide plate disposed therebetween for better fitting to the device and depending on the desired frequency characteristics.

Regarding claims 42, 43, the admitted prior art in view of Makoto shows the excitation that is disposed in contact with the frame arranged to house the light crystal panel and light guide plate (figure 11 in Makoto).

Regarding claims 48 and 49, Makoto teaches at least one other excitation source in addition to the excitation source as claimed (figures 9, 10).

Regarding claims 56, 57, 59 and 61, the admitted prior art in view of Makoto teaches a frame and a structural panel as claimed (see the frame 202, 302, 402, 502, 602 and the structural panel 208, 308, 408, 603, 608, 903, 908, figures 6, 7, 8, 10 and 11 in Makaoto).

Allowable Subject Matter

3. Claims 63-83 are allowed.
4. Claims 42, 47, 50-53, 58 and 60 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Saiki et al. (US 7,050,600) teaches a speaker system that includes a display panel for displaying an image.

Azima et al. (US 7,174,025) teaches a loudspeaker assembly comprising a visual display screen.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUYEN D. LE whose telephone number is (571) 272-7502. The examiner can normally be reached on 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CURTIS KUNTZ can be reached on (571) 272-7499. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HUYEN D. LE/
Primary Examiner, Art Unit 2614

HL
June 7, 2009